



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,071	11/25/2003	Shigetaka Kinme	04970/0200079-US0	8596
7278	7590	12/12/2005	EXAMINER	
DARBY & DARBY P.C.			SPISICH, GEORGE D	
P. O. BOX 5257			ART UNIT	
NEW YORK, NY 10150-5257			PAPER NUMBER	
			3616	
DATE MAILED: 12/12/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/723,071

Applicant(s)

KINME ET AL.

Examiner

George D. Spisich

Art Unit

3616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/26/04 &amp; 11/25/03</u> | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### *Drawings*

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the plate pieces having a length such that they pass an axial position of the protrusions (which is claim 5) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. Figure 3 may show this feature, however, Figure 2 does not properly show the plate(s) extending past the protrusions in an axial direction. It appears to the Examiner that the plates 6b should be shown in Figure 2 to extend past the protrusions 8 (which it clearly does not do) and to remain consistent with Figure 3 since cross-hatching has been used to indicate a cross-section in the plates when in this view.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering

Art Unit: 3616

of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

The disclosure is objected to because of the following informalities:

The punctuation on page 8, line 13 through page 9, line 5, which includes colons and semicolons is improper for the specification.

Appropriate correction is required.

The abstract of the disclosure is objected to because:

In line 2 of the Abstract, the word "or" is used. It appears that this is not proper. Examiner believes the word "and" is proper instead.

In at least lines 10 and 12, the word "can" is used. Applicant should use terms that positively state the invention. Examiner suggests deleting "can" in each instance.

Correction is required. See MPEP § 608.01(b).

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, line 7 is unclear. The phrase "formed separately" is unclear and unnecessary in an apparatus claim. Examiner suggests replacing this phrase with "separate".

Claim 1, line 8-9 is unclear. It is unclear if the second housing or the rings are being claimed as "relatively movable in an axial direction".

Claims 3 and 4 are unclear. It is unclear since a "portion of the ring portion where no plate piece is provided" has not yet been claimed and therefore lacks antecedent basis. Furthermore, it is unclear to claim (in claim 3) that the external diameter is "equal to or smaller than" an external diameter of the second housing (which from the specification is housing 5) since in the Figures it is shown to be larger than the external diameter of housing 5.

Claims 3 and 4, line 4 is further unclear. The phrase "is to contact with" should be "contacts" to positively claim the invention.

Claim 4 is unclear. It is unclear to claim (in claim 4) that the external diameter is "equal to or larger than" an internal diameter of the first housing (which from the

Art Unit: 3616

specification is housing 3) since in the Figures it is shown to be smaller than the internal diameter of housing 3.

Claim 6, lines 2-3 is unclear. In line 2, there is claimed the "absorbing ring which does not have the ring portion and the plate pieces" has: ring portion....and plate pieces. Examiner reads this claim to state that the ring that does NOT have the ring portion and plate pieces, has a ring portion and plate pieces. This is contradictory.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP2000-219139 (cited in Applicant's IDS) in view of Kim et al. (USPN 6,109,652).

JP '139 discloses a steering apparatus comprising a steering shaft (1) having an end portion coupled to a steering member (A), a first housing (2) for rotatably supporting the steering shaft and a second housing (4) engaged with the first housing via two impact energy absorbing rings (51a and 51b as shown in Figure 3-9) that are separate from each other in an axial direction, so as to be movable in the axial direction. The two impact energy absorbing rings are situated as the rings are situated in Applicant's invention. However, JP '139 does not show one of the first or second housing having

Art Unit: 3616

impact energy absorbing protrusions between the impact rings and the protrusions are separate from each other in an axial direction and contact the other of the first or second housing.

Kim et al. discloses a impact energy absorbing column having protrusions extending from the first or second housing (as seen in Figures 6 and 9) that are spaced axially from each other and contact the other of the first or second housing.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the steering apparatus of JP '139 to add an additional impact energy feature which includes protrusions as taught by Kim et al. so as to improve the impact energy absorbing characteristics of the steering apparatus.

Claims 2-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP2000-219139 (provided in Applicant's IDS in view of Kim et al. (USPN 6,109,652) as applied to claim 1 above, and further in view of Cooper (USPN 3,877,319) (provided in Applicant's IDS).

JP '139 in view of Kim et al. has been discussed in the prior rejection. Although JP '139 discloses impact energy absorbing rings, JP '139 does not disclose the rings having plate pieces spaced around protrusions. As stated above the impact energy absorbing rings of JP '139 having the inner and outer diameter relationships with the first and second housings as claimed in Applicant's invention.

Cooper et al. (as seen in Figs. 3 and 5) disclose an impact energy ring having a ring portion to contact with an end face of a housing and a plurality of plate pieces

Art Unit: 3616

disposed continuously with the ring portion separate from each other at intervals corresponding to impact energy absorbing protrusions (78). Cooper et al. teaches the interrelation of the impact energy absorbing rings with the protrusions and the plate pieces having a length such that the plate pieces pass an axial position of one of the first and second impact energy absorbing protrusions.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the steering apparatus of JP '139 in view of Kim et al. to include a relationship between the impact energy absorbing rings and the protrusions as taught by Copper and as is claimed, so as to further enhance the impact absorbing ability of the steering apparatus.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Milton et al. (USPN 3,703,105), Farrell et al. (USPN 3,590,655), DuRocher et al. (USPN 5,314,204), Connell et al. (USPN 3,788,148), Burkhard et al. (USPN 5,722,300), Beauch (USPN 4,805,478).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George D. Spisich whose telephone number is (571) 272-6676. The examiner can normally be reached on Monday-Friday 9:00 to 6:30 except alt. Friday.




Art Unit: 3616

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on (571) 272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

George D. Spisich  
December 2, 2005



 12/7/05  
PAUL N. DICKSON  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600